

## NZ2VZ-2131E3VSM04 (ORDER NO. 074471)

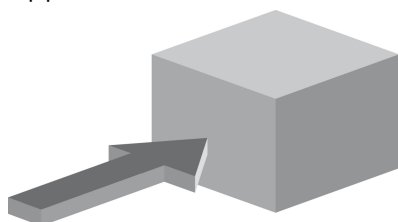
Safety switch NZ.VZ.VSM, plug connector SR11 (guard locking, closed-circuit current principle)

- ▶ Housing according to EN 50041
- ▶ Plug connector SR11



### Description

#### Approach direction



Figure

Horizontal

Can be adjusted in 90° steps

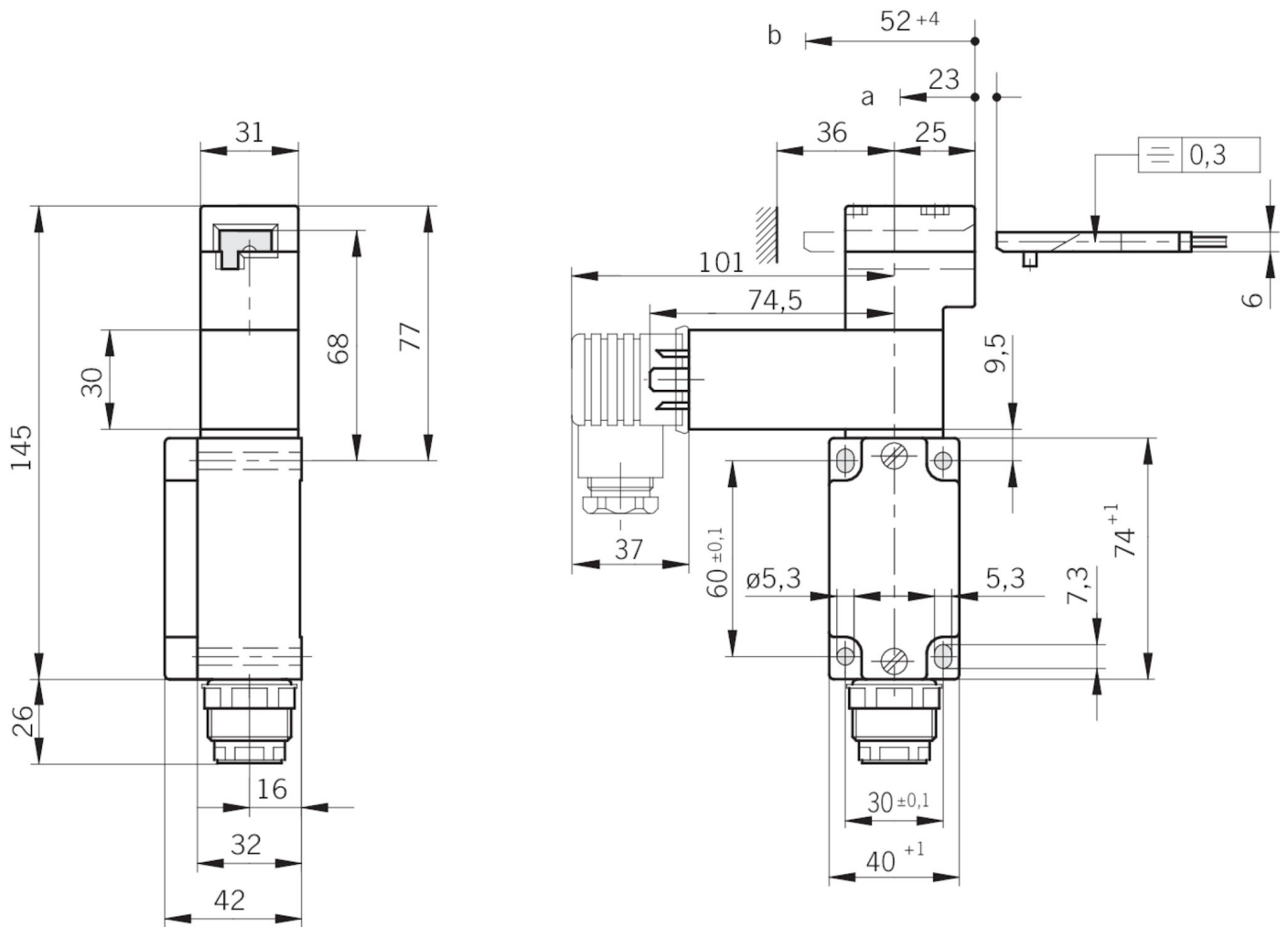
#### Guard locking type

VSM Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

#### Switching element

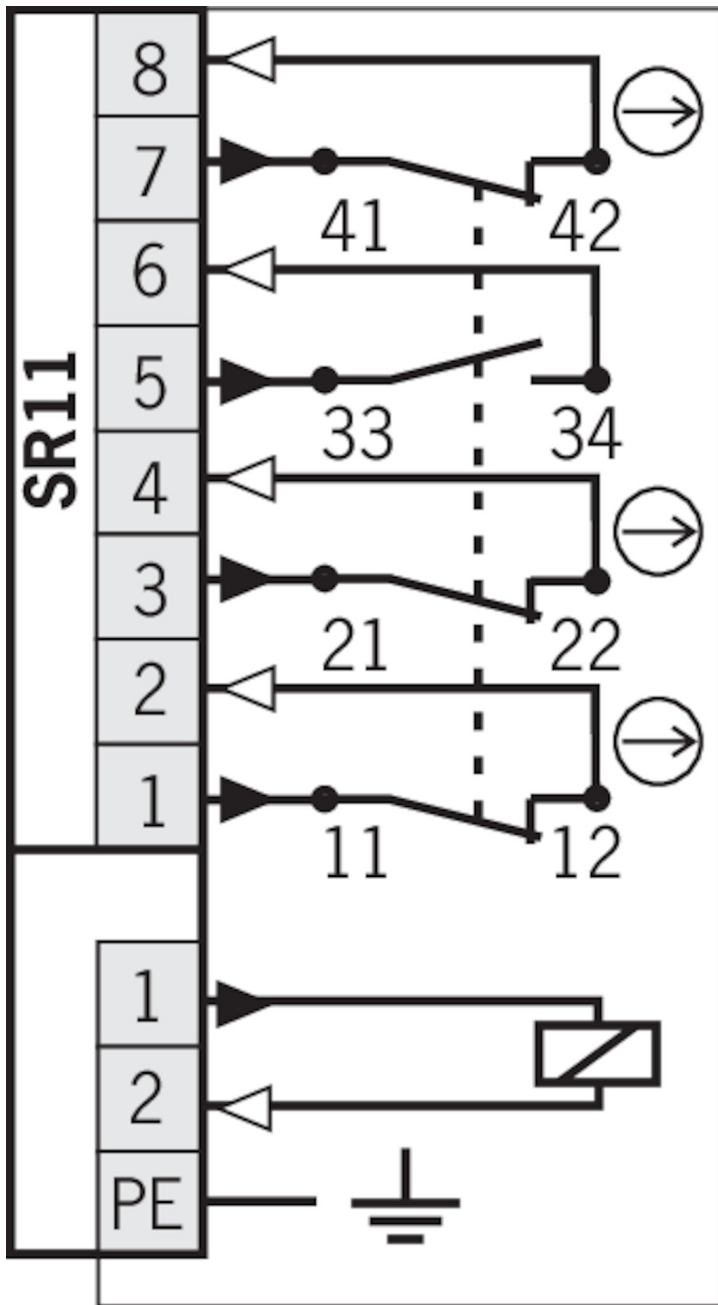
2131H Slow-action switching contact 3 NC  $\rightarrow$  + 1 NO

#### Dimension drawing

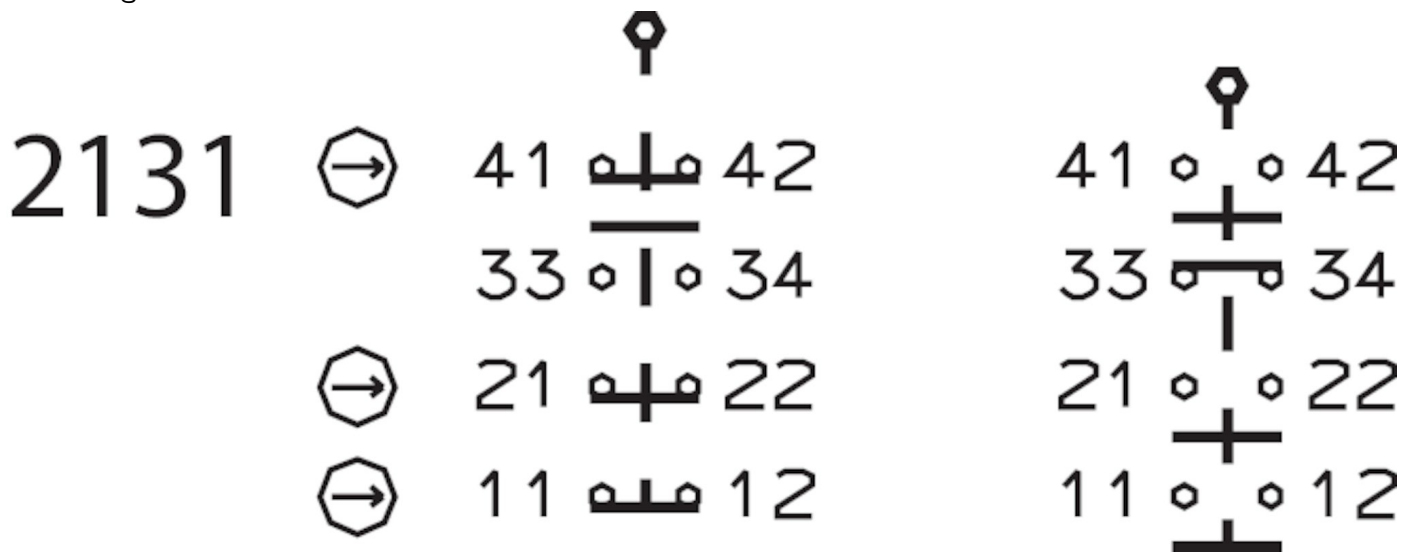


- a Travel without operation: actuator is in the guide slot, but function is not triggered.
- b Switching operation completed: actuator must be inserted to this point to ensure reliable switching. The actuator must be withdrawn at least to point a for switching off.

2131H



Switching functions



Technical data  
Approvals



## Mechanical values and environment

### Housing material

Housing Anodized die-cast alloy

### Weight

Net 0,7 kg

Ambient temperature -25 ... 80 °C

Degree of protection IP65

Mechanical life  $2 \times 10^6$

Contact material Silver alloy, gold flashed

Switching principle Slow-action switching contact

Solenoid alignment 3

Installation orientation Any

Number of door position positively driven contacts 3

Number of door position NO contacts 1

### Connection

1 x Plug connector SR11  
(11-pin + PE)

Approach speed max.20 m/min

Actuation frequency max.1200 1/h

Guard locking principle Closed-circuit current principle

Locking force  $F_{max}$  2000 N

Locking force  $F_{Zh}$  1500 N

Retention force 35 N

Extraction force 40 N

Actuating force 45 N

Insertion depth 52 mm

## Electrical connection ratings

Thermal rated current $I_{th}$	4 A ( $> 70^\circ C \Rightarrow 2 A$ )
Utilization category according to EN 60947-5-1	
	AC-15 4A 50V ( $> 70^\circ C \Rightarrow 2 A$ )
	DC-13 4A 24V ( $>70^\circ C \Rightarrow 2A$ )
Solenoid operating voltage	
	DC 24 V -15 ... 10
Short circuit protection according to IEC 60269-1	
	4A gG ( $>70^\circ C \Rightarrow 2A gG$ )
Rated insulation voltage $U_i$	
	AC/DC 50 V
Rated impulse withstand voltage $U_{imp}$	
	1,5 kV
Switching voltage	
	Min. at 10mA 12 V
Switching current	
	Min. at 24V 1 mA

#### Reliability values according to EN ISO 13849-1

	<b>Control of the guard locking</b>
Category	Depending on external control of guard locking
Performance Level	Depending on external control of guard locking
PFH <sub>D</sub>	Depending on external control of guard locking
	<b>Monitoring of the position of the safety guard</b>
B10 <sub>D</sub>	$4,5 \times 10^6$

#### In combination with Actuator BETAETIGER-Z-G

##### Mechanical values and environment

Overtravel	4 mm
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#### In combination with Actuator BETAETIGER-Z-GN

##### Mechanical values and environment

Overtravel	16 mm
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#### Accessories

##### Actuator

##### Actuators for safety switches NZ.VZ, NZ.VZ.VS and TZ



**016849**  
BETAETIGER-Z-G

- ▶ Two stainless safety screws per actuator



**074411**  
BETAETIGER-Z-G/V25

- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



**097436**  
BETAETIGER-Z-GME

- ▶ Made of solid stainless steel
- ▶ Two stainless safety screws per actuator



**072251**  
BETAETIGER-Z-GN

- ▶ Two stainless safety screws per actuator

## Hinged actuator bottom for safety switches NZ.VZ, NZ.VZ.VS and TZ



**048850**  
RADIUSBETAETIGER-Z-U

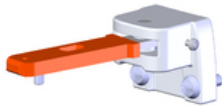
- ▶ Two stainless safety screws per actuator



**074414**  
RADIUSBETAETIGER-Z-U/V25

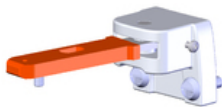
- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces

## Hinged actuator left for safety switches NZ.VZ, NZ.VZ.VS and TZ



**024298**  
RADIUSBETAETIGER-Z-L

- ▶ Two stainless safety screws per actuator



**074413**  
RADIUSBETAETIGER-Z-L/V25

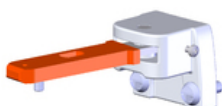
- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



**100407**  
RADIUSBETAETIGER-Z-L-C2194

- ▶ Two stainless safety screws per actuator
- ▶ Smaller door radii

## Hinged actuator right for safety switches NZ.VZ, NZ.VZ.VS and TZ



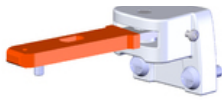
**024299**  
RADIUSBETAETIGER-Z-R

- ▶ Two stainless safety screws per actuator



**074412**

- ▶ Two stainless safety screws per actuator



**074412**  
RADIUSBETAETIGER-Z-R/V25

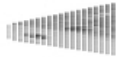
- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces



**100406**  
RADIUSBETAETIGER-Z-R-C2194

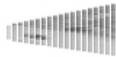
- ▶ Two stainless safety screws per actuator
- ▶ Smaller door radii

## Hinged actuator top for safety switches NZ.VZ, NZ.VZ.VS and TZ



**057950**  
RADIUSBETAETIGER-Z-O

- ▶ Two stainless safety screws per actuator



**074415**  
RADIUSBETAETIGER-Z-O/V25

- ▶ Two stainless safety screws per actuator
- ▶ Packaging unit 25 pieces

## Bolt

### Bolt NZ-A... for safety switches NZ.VZ and NZ.VZ.VS



**083890**  
RIEGEL NZ-AB

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Ball detent mechanism in closed position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



**078455**  
RIEGEL NZ-AR2

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Detent knob in open position
- ▶ Detent knob mechanism in closed position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included

### Bolt NZ-A for safety switches NZ.VZ and NZ.VZ.VS



**057734**  
RIEGEL NZ-A

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included
- ▶ Bolt is not allowed to be used in conjunction with an escape release.

### Bolt NZ-C... for safety switches NZ.VZ and NZ.VZ.VS



**083892**  
RIEGEL NZ-CB

- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Ball detent mechanism in closed position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



**078456**  
RIEGEL NZ-CR2

- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Detent knob in open position
- ▶ Detent knob mechanism in closed position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included

### Bolt NZ-C for safety switches NZ.VZ and NZ.VZ.VS



**057735**  
RIEGEL NZ-C

- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included

### Bolts NZ/TZ-S1 and NZ/TZ-S2 for safety switches NZ.VZ, NZ.VZ.VS and TZ



**028357**  
RIEGEL NZ/TZ-S1

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip bottom.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included



**028359**  
RIEGEL NZ/TZ-S2

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip top.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

### Bolts NZ/TZ-S1/AF and NZ/TZ-S1/CF with escape release for safety switches NZ.VZ, NZ.VZ.VS and TZ with escape release



**079786**  
RIEGEL NZ/TZ-S1/AF

- ▶ Aluminum bolt
- ▶ For doors hinged on the right
- ▶ Escape release
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included



**079785**  
RIEGEL NZ/TZ-S1/CF

- ▶ Aluminum bolt
- ▶ For doors hinged on the left
- ▶ Escape release
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

### Connection material

#### Connection cable with plug connector SR11, 5m



**077629**  
C-M26F12-12X1,00PU05,0-MA-077629

- ▶ Female plug SR11, 11-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 5 m
- ▶ With flying lead

#### Connection cable with plug connector SR11, 5m, angled



**077625**

- ▶ Female plug SR11, 11-pin + PE





**077635**  
C-M26F12-12X1,0PU05,0-MA-077635

- ▶ Female plug SR11, 11-pin + PE
- ▶ Angled plug connector
- ▶ PUR cable
- ▶ Cable length 5 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 10m

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**077630**  
C-M26F12-12X1,00PU10,0-MA-077630

- ▶ Female plug SR11, 11-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 10m, angled

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**077636**  
C-M26F12-12X1,0PU10,0-MA-077636

- ▶ Female plug SR11, 11-pin + PE
- ▶ Angled plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 15m

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**077631**  
C-M26F12-12X1,00PU15,0-MA-077631

- ▶ Female plug SR11, 11-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 15m, angled

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**077637**  
C-M26F12-12X1,0PU15,0-MA-077637

- ▶ Female plug SR11, 11-pin + PE
- ▶ Angled plug connector
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 20m

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**096632**  
C-M26F12-12X1,0PU20,0-MA-096632

- ▶ Female plug SR11, 11-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead

### Connection cable with plug connector SR11, 25m

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**094749**  
C-M26F12-12X1,0PU25,0-MA-094749

- ▶ Female plug SR11, 11-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead

### Plug connector SR11 for safety switches NZ and TZ

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**070859**  
SR11EF

- ▶ Crimp contacts
- ▶ Cable optional
- ▶ Coding shells

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**054773**  
SR11WF

- ▶ Crimp contacts
- ▶ 90° angled optional
- ▶ Cable optional
- ▶ Coding shells

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**091296**  
SR11AM2-M20

- ▶ Crimp contacts
- ▶ Cable optional
- ▶ Coding shells

## Solenoid plug for safety switch NZ.VZ.VS

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**028338**  
STECKVERBINDER  
M.GLEICHR.FMAGNETV.

- ▶ With rectifier for the connection of AC  
110 V - AC 230 V.

## Function expansion

### Lockout mechanism NZ.VZ/TZ, 3 holes

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**046730**  
SPERREINSATZ-Z-046730

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks



**091305**  
SPERREINSATZ MIT KETTE

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

### Lockout mechanism NZ.VZ/TZ, 5 holes

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**086538**  
SPERREINSATZ-Z-086538

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

## Protective plate NZ.VZ/TZ

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**059136**  
SCHUTZBLECH NZ/TZ

## Mounting accessories

## Mounting plates EMP-B1 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ

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093457  
EMP-B1

## Mounting plates EMP-B2 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ

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093458  
EMP-B2

## Mounting plates EMP-SC for safety switches NM, NP...AS and NZ

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085753  
EMP-SC

► For vertical and horizontal mounting of safety switches NM, NP...AS and NZ

## Spare parts

### Replacement head NZ.VZ

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076250  
BETAETIGUNGSKOPF NZVZ

## Contacts

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